

ABSTRACT

A system and method for analog and digital mixed mode simulation. The system and method simulates analog mixed signal (AMS) systems coded in one or a plurality of hardware description languages (HDLs) that describe digital subsystem, analog circuits, and mixed signal interface components. It implements and simulates AMS circuits using any standardized and specialized type of application programming interface (API) called a HDL programming language interface (PLIs). In its preferred embodiment, the system and method simulates systems coded in the popular Verilog-AMS HDL and legacy Spice HDLs. Utilization of the PLI allows for a much simplified and improved AMS simulation because the mixed mode engine implemented using the PLI invokes any commonly available digital simulator(s) for the digital engine(s) and any commonly available analog solver(s) for the analog engine(s). The system and method combines the accuracy of single kernel AMS simulation with the ease of construction and flexibility of data exchange AMS simulation.